



Bibliotherapy for Cynics Revisited: Commentary on *One Year Longitudinal Study of the Psychological Effects of Administrative Segregation*

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Abstract

A research study in Colorado recently found that administrative segregation has little effect on the psychological well-being of prisoners. We review the Colorado report, finding support for it in other research studies on the effects of prison life, solitary confinement, and sensory deprivation. However, we argue that the Colorado results must be replicated and ultimately only meta-analyses will confirm the utility of their findings to effect sound policies. Finally, some research and clinical practices are recommended to ensure that inmates in segregation are treated humanely and suffer as few iatrogenic consequences as possible.

Key words: Colorado, meta-analysis, sensory deprivation, solitary confinement, supermax.

The Colorado study (O'Keefe et al., 2010) of the psychological impact of administrative segregation on mentally ill and on-mentally ill inmates is truly a significant contribution to our knowledge base about the effects of prison life for one of the most severe forms of incarceration. Typically, when a study produces results that are viewed as highly controversial, it will be subjected to a number of methodological critiques. And that comes with the territory; no study settles an issue once and for all. Be that as it may, none of the work we are aware of that has been cited by those who contend that prisons produce serious psychological trauma comes close to the Colorado study in terms of its methodological rigor (e.g., repeated measures, comparison group design, and the choice of constructs to assess psychopathology). Thus, rather than focus on research design issues, we will take a different approach by tackling an issue

that is often left unsaid when researchers discuss a contentious matter, namely, the tendency to look at a issue primarily from the perspective of one's own scientific culture.

In so doing, it will become evident that the results of the Colorado study are not an outlier when one considers the gestalt of research on prison life. We conclude our commentary by offering a research agenda that, hopefully, will generate useful policies for evaluating prison segregation environments that will make prisons more humane environments for both "regular" inmates and those with mental health problems (DSM-IV, Axis I diagnoses).

Bibliotherapy for cynics

Academics, policy makers, and professionals in corrections are a disparate lot as to the training they receive, their knowledge base, and the prisons and samples of offenders they have been exposed to. All too frequently, debates and literature reviews in our field seem tribal in nature as issues have been framed in narrow and, often, ideological frames of reference (Gendreau, 1996; Gendreau & Ross, 1979). The end result is that convergent validity, one of the most powerful concepts in science for determining the truth of a matter, has fallen by the wayside. In this section, we show how different theories, research areas, and data bases have come together to make further sense of the Colorado results. We begin by examining two areas of research – studies on the general effects of prison life and studies on extreme conditions of confinement.

General effects of prison life

Prison management is one of the highest profile topics in penology (Gendreau & Keyes, 2001), and part of this discussion focuses on the effects of prison life on inmates (Smith & Gendreau, 2011). One theory in this area, the importation or "behavioral deep freeze" model, is relevant to the issue we are discussing. The "behavioral deep freeze" perspective contends that the characteristics an offender brings to prison are robust indicators of how he or she copes with incarceration (Zamble & Porporino, 1988; 1990). A substantial literature supports this position, which, regrettably, has been ignored (see Bonta & Gendreau, 1990 for a review of 15 studies; and, more recently, Andersen, Lillebaek, Gabrielsen, & Hemmingsen, 2003 for several more). These studies reported negligible effect sizes on inmates' cognitive function, personality, mood (e.g., anxiety, depression), and psychophysiological measures. The research designs of these studies, whether cross-sectional (follow-ups up to 14 years) or longitudinal (up to 2 years), all reached the same conclusion. Zamble (1992) concluded from his own work, which also serves as a succinct summary for the entire field, that "the most striking result was in the total absence of any evidence for general or widespread deteriorative effects" from incarceration. Before cynics dismiss this conclusion out of hand, it should be noted that a majority of these studies were conducted 35-50 years ago when prisons had similar restrictions on prisoner movement now seen in contemporary administrative segregation facilities. At the time, inmates were held in 23 hours lock-up, treatment programs were in their infancy or at best primitive (e.g., ECT), and contact with the outside world (e.g., visits, temporary absences) was minimal. In some cases, rock gangs and the lash were still in force.

A subset of prison life research deserves mention. This is the case of overcrowded prisons, a condition that has the potential to produce negative psychological side effects. Bonta & Gendreau (1990, p.350-

355) summarized this literature with a meta-analysis. They reported that crowding correlated modestly (r values $\sim .20$) with physiological indices (e.g., raised blood pressure, heart rate) and verbal reports of psychological stress (e.g., feelings of discomfort, of being crowded), but there was only a weak correlation ($<.10$) with acting out behavior. They cautioned that other factors could have explained a large part of the variance in their results, such as how the prison was managed, poor staff supervisory practices, sudden disruptions in prison routines, and individual differences (e.g., inmates' age and pre-existing medical conditions). These findings should be updated with another meta-analysis.

Extreme conditions of confinement

Now we address a specific form of incarceration, solitary confinement (SC), which is a feature of any medium/maximum security prison. Before any discussion ensues on SC, it is essential that one is aware of -- using a musical analogy-- the root chord /scale of the issue. Here we refer to the sensation and perception literature in psychology. Within this broad domain, there is an area known as restricted environmental stimulation (Suedfeld, 1980) or sensory deprivation (SD) (Zubek, 1969). Our preference is for Suedfeld's term which encompasses environments that range from minimal sensory stimulation to monotonous stimulation. We find it odd that this subject matter has been given short shrift in the prison literature. We make an issue of this because it was the SD literature that first sounded the alarms that environments could be harmful in a number of circumstances. As well, it was from this literature that a crucial methodological problem was uncovered that is directly relevant to our present discussion.

We begin our story by revisiting the 1950's when the first SD experiments were conducted at McGill University. They reported dramatic cognitive deterioration and perceptual impairment (e.g., Bexton, Heron & Scott, 1954). Surprisingly, the McGill results could not be replicated later on by researchers (e.g., Zubek), who initially worked with the Donald Hebb group at McGill. We urge readers to read the Zubek studies, which used college students whom one would think would be very vulnerable. The extreme harshness of some of the SC conditions students endured -- with little after effects -- make SC prison environments seem like a Club Med (e.g., Zubek, Bayer & Shephard, 1969).

Why were the McGill results not reaffirmed? The truth of the matter took some time to be recognized (see Zubek, 1969; Hunt & Chefurka, 1976), but it all started with a landmark study. Orne and Scheibe (1964) discovered that a strong placebo effect likely took place in SD experiments if great care was not taken as to how information was elicited from participants. In other words, they observed, "subjects' behavior can be differentially manipulated by altering the implicit and explicit clues in the experimental situation, and further (they) may react to social cues or demand characteristics in such a way as to confound experimental results." (Orne & Scheibe, 1964, p.10)

The SD story now takes an interesting turn. In the early 1960's, the Canadian Penitentiary Service had been following the SD literature closely. Officials at head office and clinicians in the field, including the lead author of this article, made the reasonable clinical assumption that the Canadian penitentiary solitary confinement (SC) cells seemed to physically resemble SD experimental conditions. It was decided to assess if inmates in SC cells could, indeed, reproduce the McGill findings. Clearly, if this were the case, the health care implications for the penitentiary service would be profound. Thereupon, a series of true experimental design studies (with durations of 2-8 days) were carried out to establish whether prison SC

was really an SD environment and, if so, what were the effects on inmates (for a summary of some of these studies, see Bonta and Gendreau, 1990; also see a separate study by Walters, Callaghan and Newman, 1963). According to the SD literature, and this is a crucial point, for SC to be recognized as a form of SD meant that the researchers had to establish that inmates in SC should exhibit a lowered EEG frequency, which is indicative of lowered sensory arousal/cortical activity and a need for sensory stimulation (measured by visually evoked potentials), and lower stress levels (indicated by plasma cortisol levels). This was confirmed by Gendreau, Freedman, Wilde and Scott (1968; 1972) and Eccelstone, Gendreau, and Knox (1974). Other studies by this group also found no iatrogenic consequences for inmates' physical health, auditory and visual functioning, and discrimination learning ability.

Subsequently, other SC studies appeared that had more ecological validity than the aforementioned in that they examined inmates sent to SC involuntarily (Andersen et al., 2003; Suedfeld, Ramirez, Deaton, & Baker-Brown, 1982; Wormith, Tellier, & Gendreau, 1988, and Zinger, Wichman, & Andrews, 2001). Collectively they encompassed longitudinal assessments, repeated measure comparison group designs, multi-site replications, different forms of segregation, female samples, standardized assessments, and assessments of the chronicity of the situation. The strongest effects were reports of increases in hostility and depression, but the effect sizes were not large or ubiquitous. Moreover, some improvements were recorded in mental health functioning.

Finally, none of the aforementioned studies sampled mentally ill inmates. As a side note, two views exist as to how mentally ill inmates, defined by DSM-IV, Axis 1, or schizoid symptoms, might react to segregation. The criminological perspective (Mears & Watson, 2006) is that the mentally ill should be adversely affected, but no theoretical rationale has been presented for this. On the other hand, the psychiatric literature suggests that mentally ill inmates might react positively to SC because of their need for less stimulation (Grassian and Friedman, 1986). In truth, one of the common observations from our psychiatric colleagues who work in prisons is that inmates with mental illness seek out SC (for one of the first articles to recognize this fact, see Scott and Gendreau, 1969). Note as well that the specific responsivity principle of effective correctional treatment suggests that offenders with mental illness respond best in environments that have reduced sensory input (Smith, Gendreau, & Goggin, 2008).

Reviving Orne and Scheibe

Fast forward two decades after Orne and Scheibe's (1974) critique of SD research to two of the studies that have garnered the most attention judging by citations in the field. Grassian (1983) claimed that prison SC conditions produced noticeable psychological harm (e.g., hallucinations, overt psychotic disorganization, massive free floating anxiety, primitive aggressive fantasies, paranoia, and lack of impulse control leading to random violence). His assessment protocol consisted of open-ended interviews, and an interview style that actively encouraged disclosure, provided reassurance, and frequently confronted gaps in information because the 15 inmates interviewed for this study were not forthcoming about the pains of segregation. The inmates, by the way, were involved in a class action suit against the state, a situation that was highly likely to influence their responses to repeated questioning.

Twenty years later, Haney (2003) came to similar conclusions on a sample of 100 inmates in a supermax prison. Haney employed face-to-face interviews; it is unclear exactly what measures were used. There was no indication as to whether the prevalence of the symptoms reported by the sample existed before incarceration in the supermax or how long they lasted after the assessment. His methodology, like Grassian's, was the weakest quasi-experimental design possible (i.e., post-test only). Haney went on at length about how many offenders voiced few specific complaints and were often not aware, even incapable of reporting their distress. How then did the reports of serious psychological malaise come to light in the Grassian and Haney studies; was it for some of the reasons identified by Orne and Scheibe (1964)?

In summary, if there are outliers in the literature it is from studies that claim segregation produced vivid negative psychological effects. The convergent validity in support of the O'Keefe et al. (2010) conclusions are powerful. Consider the facts: a theoretical and empirical foundation from other research areas, different inmate and non-inmate samples, volunteers and non-volunteers, different levels of the severity of lock-up, and varying follow-up periods all point to the fact that while segregation environments do produce findings that fit the definition of SD, but the negative effects are not nearly as dramatic as once feared.

Does this mean the case is closed, that correctional policy makers can relax and keep on doing business as usual because of the final word from the Colorado study? Far from it, which leads to our final observations, that is, what research and clinical practices should be conducted to deal with segregation in an ethical and humane fashion as possible?

Recommendations for research and clinical practice

We offer several recommendations proceeding from a broad-spectrum proposal to explicit suggestions as to how to approach the segregation question. As part of this exercise, our last proposal identifies the dominant factor that accounts for those occasions when inmates react badly, and with justification, to their situation.

Take a meta-analytic perspective

When you add to the mix civil rights, moral, and political agendas (Jackson, 2002; Mears & Watson, 2006) in a field where researchers are already divided, the truth of the matter becomes elusive. The discourse that follows from this state of affairs is antithetical to how science takes stock, which is by patiently accumulating knowledge that is then summarized by meta-analysis (Hunt, 1996). The blunt reality, and this is not a criticism of the Colorado researchers who are doing what should be done, is that single studies offer limited information (Schmidt, 1992). Useful policies in the social sciences are based on replication, and lots of it, before sound conclusions can be reached (Hunter and Schmidt, 1996).

Obviously, from the tenor of our comments, we happen to believe that the Colorado study is on the right track, but if one were to put confidence intervals around this study's effect sizes they would be far too wide to state, with any sort of precision, the effects of segregation. For the interested reader, a discussion on the use of confidence intervals and their width for determining when an estimate of an effect size is precise enough for formulating policy can be found in Gendreau and Smith (2007). While the Colorado study failed to use confidence intervals, they did make excellent use of graphs, which are more convincing than significance testing for depicting results for practitioners and policy makers (Gendreau & Smith, 2007).

So, how much more research needs to be done? Certainly, research based on small samples of inmates is unacceptable, no matter what side of the issue one sides with. At the very minimum, and this estimate comes from the offender prediction literature for one risk instrument only, 30 effect sizes involving several thousand offenders was considered marginally adequate, but for other topics (e.g., offender treatment) the volume of research has been very much more (Gendreau & Smith, 2007). Given the different type of mental health outcomes in segregation research, we estimate that 200 effect sizes with a sample size of 30,000 would be necessary to come to firm conclusions. Before corrections administrators faint at the effort necessary to meet this objective, consider how quickly the data would be amassed if just a few other prison systems had the professional integrity of Colorado's and routinely monitored changes in the psychological functioning of their segregation inmates. In fact, the study was not that hard to do (O'Keefe, personal communication, February 10, 2011). In the interim, a preliminary meta-analysis should be conducted on the existing literature even though few studies are available.

Divert inmates that cannot cope with segregation to other cellular accommodations

Virtually nothing is known about the traits of inmates who cannot tolerate segregation. Some examples are high stimulation seeking, impulsivity, low conceptual level, and low adrenal functioning (Gendreau & Bonta, 1984; Zubek, 1969), but these results are highly tentative. As with the first recommendation, collecting this information should not be onerous. Most prison systems should have some data already at hand in their files to commence development of a screening measure for this purpose.

Screening out mentally ill inmates from segregation

In order to assess the number of mentally ill inmates (those diagnosed on DSM-IV criteria) who may be sent to segregation, state of the art psychiatric screening measures should be employed to identify them and place them in prison hospital wards. Regrettably, very few psychiatric assessment measures (18% of just over 1,000 instruments surveyed) have any predictive validity. (Smith et al., 2008, Table 8.1). One measure, however, stands out for the magnitude of its predictive validities and is the measure of choice. It is the Camberwell Family Interview, a measure that assesses expressed emotion, one of the best single variables for predicting psychiatric relapse.

Prevention, prediction, and treatment for high-risk inmates

Segregation is often overcrowded with inmates who are prone to getting into trouble in prison (i.e., misconducts). Given their acting out nature, many are sent to segregation where some will likely react badly. There now is a sizeable data base from meta-analyses identifying those inmates who are at risk of

committing misconducts and what type of treatment programs reduce prison anti-social behavior (French & Gendreau, 2006; Gendreau, Goggin, & Law, 1997). There is no compelling reason why these research findings cannot be put to use.

Treat inmates respectfully

Some inmates can be very difficult to manage and try the patience of custodians and clinicians to the breaking point. Nevertheless, the guiding principle of any human service enterprise is to treat individuals with respect and humane care. We have been involved with about 100 prisons in our careers as researchers, clinicians, and investigators of clinical and health care service quality. A fact of prison life that has impressed us over the years is that the quality of the physical environment (unless it does not meet Geneva convention-like standards and, admittedly there are a few prisons like that) was not related to how inmates reacted to their treatment by their captors (see also Bonta & Gendreau, 1984; Jackson, 1983; Vantour, 1975).

Our challenge, and it can be framed as a research question, to those who take issue with the findings we have presented here (and the O'Keefe et al. results) is that future research on the effects of segregation should always measure the quality of care inmates receive. Based on the literature we reviewed and special enquiries into abuses in prisons by independent bodies (e.g., Arbour, 2006; Human Rights Watch, 2000; Jackson, 1983; 2002; Suedfeld et al., 1992; Vantour, 1975; Wormith et al, 1988) one cannot help but conclude that maltreatment by correctional personnel causes the great majority of the problems seen in segregation.. The most common complaints we have encountered have been confusing criteria for being placed in SC, uncertainty as to the review process and what inmates could do to improve their lot, and undue, malicious provocations by custodial staff often over petty matters. Indeed, Jackson (1983), who has been a leading critic of the manner by which correctional authorities manage prisoners has agreed with our point that the physical milieu is not nearly as crucial as the psychological (see Bonta & Gendreau, 1984). Having said that, based on the way some of our American colleagues describe how supermax units are administered in their country, the conditions are ripe for provoking pathological reactions among inmates. One way of countering that is to consider how other systems tackle this problem. In Canada's federal system, mandatory reviews of inmates' progress in segregation are frequently conducted by clinical staff, case managers, and parole officers. As well, the Office of the Correctional Investigator routinely conducts independent enquiries of the conditions of confinement and reports to the powers that be. As an aside, the number of inmates in Canada's federal prison system who are in SHU units, which seem very similar to supermax cells in the United States, is about 60 on a given day for the entire system which houses about 14,000 inmates.

Conclusion

The Colorado report, along with recent contributions from many scholars (among others, Arrigo, Brodsky, Cloyes, Dvoskin, Jemelka, Lovell, Motiuk, Rhodes, Pizarro, and Toch) whose work we did not delve into here, has given energy to the field. With any luck, the research on this issue will continue and have an influence on the forces that have promoted the rise of supermax prison conditions. As a final point, when discussing the potential harms that prisons may incur, a huge problem, arguably more serious than the topic under discussion, is that prisons are schools of crime for lower-risk inmates (e.g., increased

misconducts in prison and post-release recidivism), but that is a story for another time (Smith & Gendreau, 2011).

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